

PATENT  
Atty. Dkt. No. APPM/006392.Y1/D\$M/LCW K/JP

**IN THE CLAIMS:**

Please cancel claims 26-28, 30, 35-37, 39, 41, and 51-61, and amend claim 47 as follows:

1-45. (Cancelled)

46. (Previously Presented) A method for depositing a silicon carbide layer on a substrate, comprising:

introducing a processing gas comprising an organosilicon compound into a processing chamber containing the substrate therein, wherein the organosilicon compound has the formula  $\text{SiH}_a(\text{CH}_3)_b(\text{C}_6\text{H}_5)_c$ , wherein c is 2 and  $a+b+c=4$ ; and

reacting the organosilicon compound to deposit the silicon carbide layer on the substrate.

47. (Currently Amended) The method of claim 46, wherein the processing gas further comprises a dopant selected from the group consisting of ~~an oxygen-containing compound, a nitrogen-containing compound, a boron-containing compound, a phosphorus-containing compound, organosiloxane compounds, 1,3,5,7-tetramethylecyclotetrasiloxane (TMCTS), octamethylecyclotetrasiloxane (OMCTS), 1,1,3,3-tetramethyldisiloxane (TMDSO), phosphine (PH<sub>3</sub>), borane (BH<sub>3</sub>), diborane (B<sub>2</sub>H<sub>6</sub>), silazane compounds, trimethylsilane, oxygen (O<sub>2</sub>), ozone (O<sub>3</sub>), carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), ammonia (NH<sub>3</sub>), nitrogen (N<sub>2</sub>), and combinations thereof.~~

48. (Previously Presented) The method of claim 46, wherein the organosilicon compound is selected from the group consisting of diphenylmethylsilane ( $\text{SiH}_1(\text{CH}_3)_1(\text{C}_6\text{H}_5)_2$ ), diphenyldimethylsilane ( $\text{Si}(\text{CH}_3)_2(\text{C}_6\text{H}_5)_2$ ), diphenylsilane ( $\text{SiH}_2(\text{C}_6\text{H}_5)_2$ ), and combinations thereof.

49. (Previously Presented) The method of claim 46, wherein the silicon carbide layer is deposited in a damascene structure as a material layer selected from the group

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consisting of a silicon carbide-containing barrier layer and a silicon carbide-containing etch stop layer.

50. (Previously Presented) The method of claim 46, wherein the silicon carbide layer has a dielectric constant of less than 4.

51-61. (Cancelled)